

CESAP and Heat Decarbonisation

APSE Renewable & Energy Efficiency Advisory group

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Aims for today

Overall aim Two-way discussion around Heat Decarbonisation skills, some information on how SDS link in and chance for us to build evidence and insight.

Core Scope - linked to energy efficiency and move to micro-generation and equivalent low carbon heat sources (e.g heat pumps)

Content ;

Why - Challenge of Heat Decarbonisation in Buildings

Background – Climate Emergency Skills Action Plan (CESAP)

CESAP Heat Decarbonisation Industry Skills Sub Group ; Collaboration, connection and optimisation

Chance for Questions & Discussion


(Scottish Government) Heat In Buildings Strategy

 2045 Homes no longer contribute to Climate Change

 All homes EPC C or equivalent by 2033

 Homes to a good standard of energy efficiency (2030)

 170,000 off-gas homes moved to Zero-Carbon Heating (2030)

 1 million on-gas homes; 50,000 Non-Domestic properties to low carbon heat (2030)

Factors to consider

Many critical roles sit within Built Environment and Construction – so existing challenges apply.

Demographic challenges – Aging workforce (common across many sectors)

21-24 23,400 and 24-31 48,700 Replacement & Growth Demand

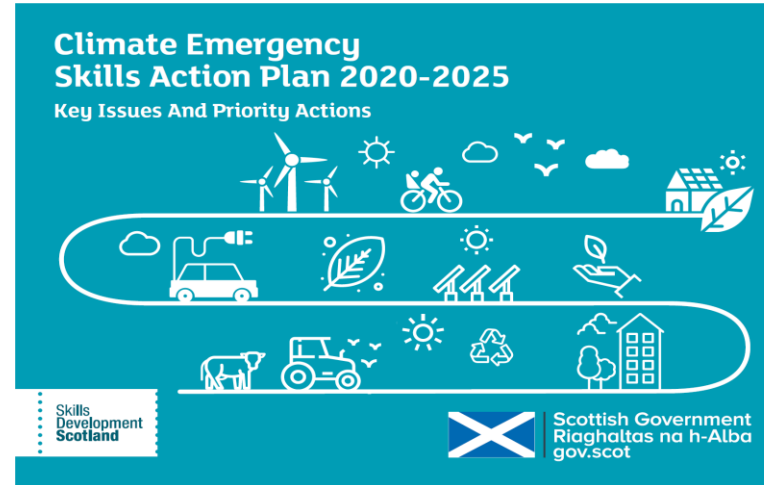
This is an evolving area and while policy is clear, many uncertainties remain

Skill shortages reported across the sector and many competing work areas

CESAP - One of other competing priorities

Reaching net zero by 2045 requires transformational change across the economy and society, providing opportunities for:

- new, quality green jobs
- embedding green and circular economy skills
- increasing access to growing global green markets
- stimulating regional growth
- providing enhanced access to nature and the environment



Opportunities for growth

Energy transition

Inc oil & gas, on and offshore wind, hydrogen, electricity, carbon capture and storage

Construction

Inc retrofitting of housing and non-residential properties

Transport

Inc road transport, railways, domestic aviation, shipping and aircraft support vehicles

Manufacturing

with a focus on engineering

Agriculture and land use management

Inc forestry

Implementation Priorities

1. Inspiring and empowering **young people** to engage with the transition to net zero
2. Support transitioning and **upskilling** to meet emerging green jobs skills needs through the creation of a **Green Jobs Workforce Academy**
3. Securing the **talent pipeline** for future net-zero jobs by **aligning WBL, FE and HE provision** behind the needs of the net-zero transition
4. Helping **employers and individuals** to capitalise on net zero transition opportunities and facilitating **behaviour change**
5. Driving change in the **skills system**

Priority 1



Inspiring and empowering **young people** to engage with the transition to net zero

Objectives

- Rapid expansion and national scaling of Climate Education in Schools
- Embed green skills into apprenticeship frameworks aligned to net zero occupations
- Promote emerging green careers opportunities to young people

Project Examples

- **Fuel Change Apprenticeship Challenge** – unleash the underestimated skills and energy of Scotland’s youth by partnering with educators and business to help solve their carbon challenges
- **My Climate Path** – a COP26 education legacy initiative created by DYW
- **My World of Work** green careers page – resource to explore the different types of green jobs, examples of some subjects you can take if you’re interested in a green career and Find different routes into these roles

Priority 3



Securing the **talent pipeline** for future net-zero jobs by **aligning WBL, FE and HE provision** behind the needs of the net-zero transition.

Objectives

- Develop an understanding of whether provision currently meets the needs of the net-zero transition
- Develop new work-based learning pathways to capitalise on net-zero opportunities
- Align WBL, education and training opportunities in colleges and universities to maximise uptake of net-zero opportunities

Project Examples

- **Green Skills Academy** – Dumfries and Galloway College offers a range of education and training opportunities to allow students to learn new skills, upskill existing knowledge or reskill to a more sustainable future and career path
- **Renewable & Energy Efficiency Training Centres** – nine centres launched in 2021, supported by Energy Skills Partnership and funded by SP Energy Networks' £20million Green Economy Fund

Priority 4



Helping **employers and individuals** to capitalise on net zero transition opportunities and facilitating **behaviour change**

Objectives

- Establishment of a Green Jobs Skills Hub
- Raise awareness amongst employers of the need for behaviour change, and changes to workplace practices
- Further development of leadership and management skills required for a net zero future

Project Examples

- **Transitioning at Pace to Net Zero (TAP)** – Project aims to enable senior leaders to develop skills and knowledge to influence meaningful change within their organisation in relation to Net Zero ambition
- **Climate Emergency Literacy Training** – To support with the transition and upskilling required across Scotland's future and existing workforce to help key sectors and businesses respond to the Climate Emergency and transition to a net zero society

Find out more on the implementation plan [website](#), including further information on the other priorities and the role of the just transition in the CESAP.



Climate Emergency Skills Action Plan Implementation Plan

[Homepage](#) > [What We Do](#) > [Skills Planning & Alignment](#) > [Skills Planning](#) > [Climate Emergency Skills Action Plan Implementation Plan](#)

Reaching Scotland's ambition of becoming a net zero carbon emitter by 2045 requires transformational change.

More skilled people will be needed across a range of jobs to cut the carbon footprint and create new, environmentally friendly solutions.

There is a need to adapt to the changing demand for skills, not just in sectors with a critical contribution to make to net zero such as energy transition or construction, but across the whole economy.

This requires both a skills system and a labour market which are more agile, proactive, responsive and resilient than ever before.

Published in December 2020, the Climate Emergency Skills Action Plan sets out the government's plan to maximise the transition to net-zero for Scotland, ensuring that Scotland's workforce has the skills required to make the transition to net-zero a just transition, fair and inclusive to all.

It will act as a driver towards Scotland's ambition to be a world leader in decarbonisation, aiming to reduce reach zero greenhouse gases by 2045, with an interim reduction of 45 per cent by 2030.

It sets out a clear direction for the changes needed in the skills system, and signals the role that industry, communities and individuals across Scotland will play in achieving this.



"Reaching net zero requires transformational change across our economy, with all of us working together to ensure individuals in Scotland are supported to take advantage of the opportunities it brings. This action plan identifies a series of priority areas for employers, education and individuals that will help us to do just that, and is a leading example of planning for green skills against climate change targets."

Professor Dave Reay, Chair, Climate Emergency Skills Action Plan Implementation Steering Group

Heat Decarbonisation Sub Group - Purpose

✓ Group formed 2022, met twice, chaired by prof Steve Petrie Balfour Beattie

Main Focus

- Over arching & connected voice
- Direct input from Employers and Industry
- Strategic assessment of skills needs
- Influence training, pathways and activity (including funding)
- Influence collaborative bids investment
- Challenge status quo
- Link CESAP ISG

Principles

- Skills for Heat in Building Strategy core focus
- SDS support and enable
- Many actions sit across multiple organisations/ sector

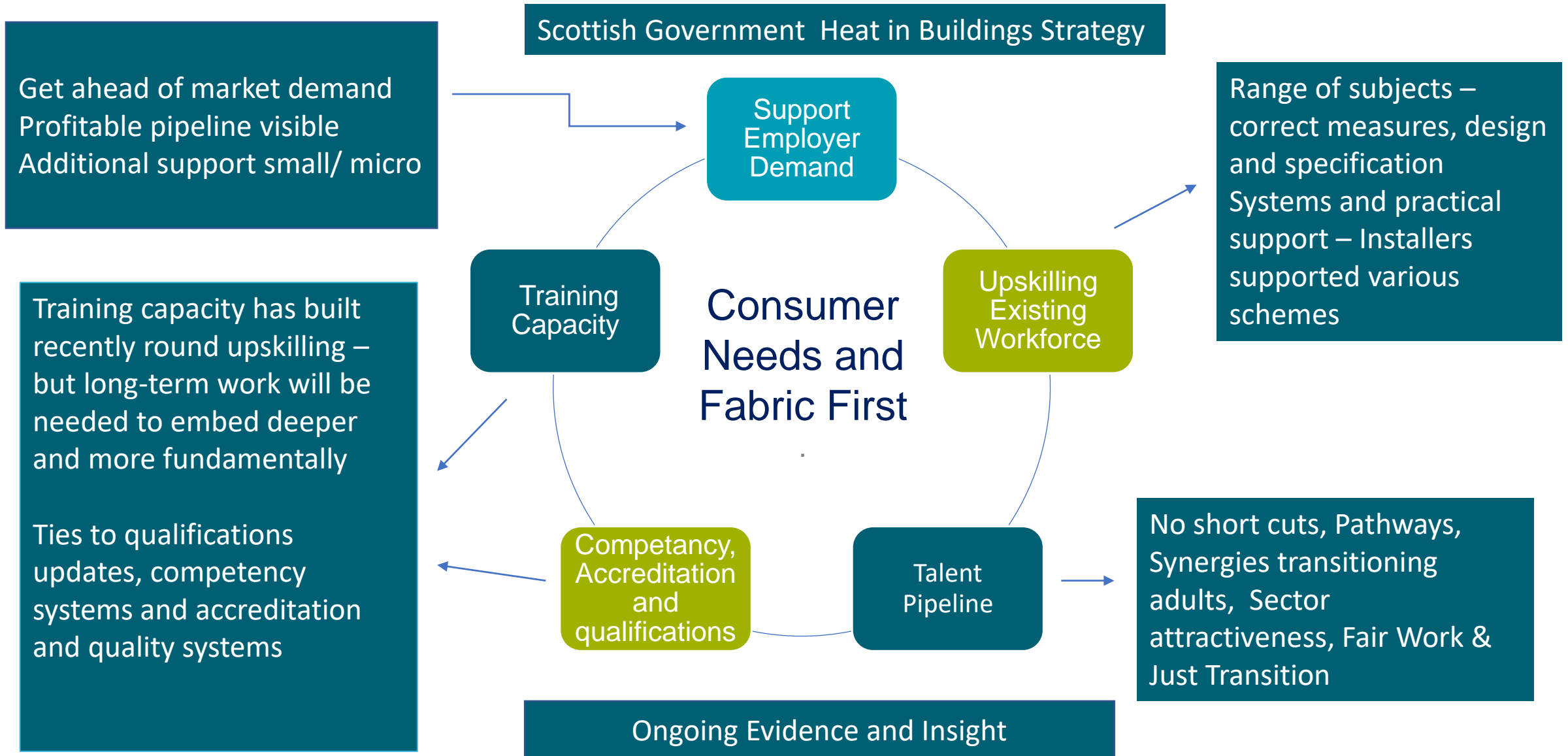
Not in direct scope – but connections

- District heating/ heat networks
- Energy efficiency not connected to “heat”

Not in scope – sits elsewhere

- Manufacturers of equipment
- Macro solutions such as Hydrogen

Sub-group Demand Statement



Some activity.....

Infrastructure Investment

SPEN investment into college network

- £750k invested via Scottish Power Energy Network to build energy efficiency college infrastructure → six new centres in colleges, upgrades to two existing centres
- Creation of four centres of excellence for insulation

BE-ST Innovation Centre Training

four timber based Passivhaus and retrofit structures + steel rig → used for hands on training

EST – Grant for colleges to buy equipment for low carbon training → rigs for their facilities, also to support colleges in North

Train the Trainers

ESP NTTF funding to train lecturers around solar thermal and heat pumps

Wider college upskilling

ESP Manufacturer CPD and links for college lecturers

BE-ST – Suite used for upskilling Train the Trainer network

Supporting

ESP Energy Efficiency Training Network → 18 college members

ESP Insulation Training Network → 5 colleges

CITB adding **retrofit competencies** into Site Supervisor and Site Manager NOS, Insulation and Building Treatments L5 and L6 SVQ, Ongoing update of qualifications, including in heritage, stonemasonry, cladding (22/23)

MA development process – three construction MAs updated

Some activity.....

Installation Skills Training

18 colleges offer short upskilling training linked to energy efficiency and microgeneration → includes 5 offering insulation and 14 offering or working to offer heat pump training

Trade association network offer short courses to members and non-members via The BESA, SELECT and SNIPEF directly linked to occupation specific energy efficiency and microgeneration

HES – Energy efficiency of older buildings training available and funded via NTTF

EST – run webinars around heat pumps (incl. maintenance and refrigeration/f-gas) + Grant support MCS accreditation

Warmworks – Upskilling installer base working with Vaillant + Onboarding process to support new installers

Industry Low Carbon Training

BE-ST – Offering **low carbon innovation leading learning** on range of topics including Passivhaus, enerPHit, Fabric & Structure, net zero, carbon accounting (NTTF funded)

RGU – launching a **PGCert on Building Retrofit in 22/23**

MCS – Future Leaders in Low Carbon Programme

NTTF – Climate Emergency Literacy and Transitioning at Pace Management & Leadership training

Supply Chain Sustainability School → free online learning offer

Supporting Activity

HES – Outreach programme across public sector and influencing organisations includes upskilling Energy Saving Trust Advisors

Trade Associations – Play major influencing role, working across organisations like CIBSE, BEIS, BSI, ACRIB

Unite – Scottish Union Learning Fund (STUC administer) can support some linked courses

BESA – Heat Pump Installer awareness course development & delivery → theory around heating systems and customer communication

CITB – Active support for training groups

SE - *Entrepreneurial Academy*

EST – Delivered additional modules for apprentices on renewables

Discussion and Observation

Any views on skills demand slide?

How to collaborate and communicate more?

Challenge is massive and major fundamental changes

Need work across multiple organisations at pace – no one organisation owns

Thank you